August AQ Health Task Force Meeting

**Date:** August 21, 2020

**Time:** 9:30 - 11:30 am (CST)

Zoom Meeting

**Attendees:**

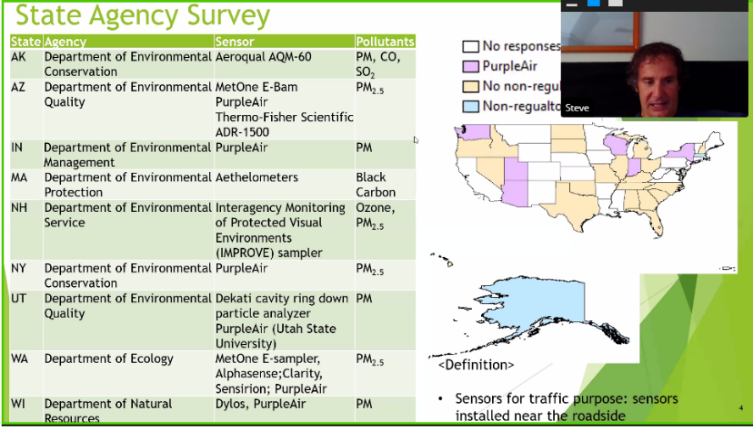
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| --- | --- |
| **Name** | **Organization** |
| Abhijit Basu | SmartEx |
| Anthony Williams | City of Fort Worth |
| Emily Asbury | City of Irving |
| Grace Tee Lewis | Environmental Defense Fund (EDF) |
| Jeremy Johnson | Texas A&M Transportation Institute (TTI) |
| Kathy Fonville | City of Mesquite |
| Katy Evans | City of Dallas |
| Kevin Overton | City of Dallas |
| Lu Liang | University of North Texas (UNT) |
| Maia Draper | Environmental Defense Fund (EDF) |
| Mendie White | City of Lewisville |
| Pharr Andrews | City of Dallas |
| Razieh Nadafian | Environmental Defense Fund (EDF) |
| Theresa Daniel | Dallas County |
| Zoe Bolack | DFW International Airport |
| Yarcus Lewis | City of Plano |
| Steve Mattingly | University of Texas Arlington |
| Jaesik Choi | University of Texas Arlington |
| Kate Zielke | NCTCOG |
| Vivek Thimmavajjhala | NCTCOG |
| Lori Clark | NCTCOG |
| Jenny Narvaez | NCTCOG |
| Nick Van Haasen | NCTCOG |
| Laura Davila | NCTCOG |
| Dorothy Gilliam | NCTCOG |

# **Meeting Summary**

# **Project Update from the University of Texas Arlington**

**Presenter: Dr. Mattingly UTA**

Email survey was conducted to 50 states agencies between June and July 2020

* 29 states responded

**PM Sensors**

PurpleAir

* Used more often
* Performs well
* Low cost
* Wi-Fi dependent

**Ozone sensors**

* Lifetime of sensors has concerns, as they typically have a short life span

**NO2 sensors**

* + Not much clarity
  + CARTOLA seems to be best option at this point

**Feedback from agencies**

* Most states perform maintenance to sensors about once a month
* Many states use low cost sensors
* PM seems to be the focus of most of the states

**UTA Recommendations are based on:**

* Cost
* Ease of operation
* Data record/logging
* Accuracy
* Longevity

# **Evaluating Air Quality, Health and Environmental Justice in Houston Methods and Takeaways for the DFW Region**

**Presenter: Dr. Grace Tee Lewis - EDF**

**Houston Air Quality**

* Ranked 14 for high ozone days out of 229 metropolitan areas
* Ranked 56 for 24-hour particle pollution out of 216 metropolitan areas

The Houston-Galveston-Brazoria (HGB) area regularly faces challenges and Hurricane Harvey highlighted the disadvantage minority communities face

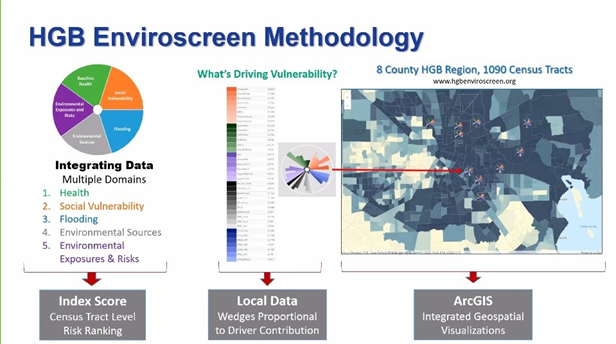
**HGB Enviroscreen Tool Link:**   [https://hgbenviroscreen.org/](https://gcc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fhgbenviroscreen.org%2F&data=02%7C01%7CDGilliam%40nctcog.org%7C739cc56fa0b543c51c5808d84914754c%7C2f5e7ebc22b04fbe934caabddb4e29b1%7C0%7C0%7C637339699510478868&sdata=M4OeOkIkxQKC4GHZ5VmALQGotjBDAG8d8%2FMfPG3H2RY%3D&reserved=0)

Interactive maps allow you to visualize what makes an area vulnerable

* East Houston is highest ranking in vulnerable communities

In the future they want to use this for Transportation Planning, and they wish to:

* Incorporate air quality and health considerations
* Have a scientific data approach
* Get the Houston Galveston Area Council (HGAC) region on census track resolution



**Community Action Planning**

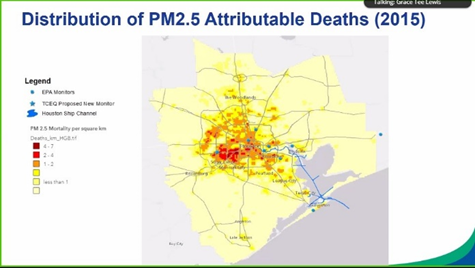
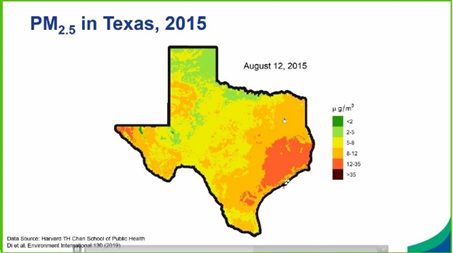
* + Rank Census tracks in the HGB Enviroscreen Tool are EPA Toxicological Prioritization Index (ToxPi)
  + Integrates pollution and vulnerability data
  + Identifies areas where vulnerable communities need help

Integration of data:

* Health
* Social Vulnerability
* Flooding
* Environmental Sources
* Environmental Exposures and Risks

**PM 2.5 Ensemble Data:**

Methodology

* Examining the correlation between PM 2.5 and mortality rates
* Low income communities have a higher exposure to PM 2.5
* TCEQ has approved air monitor in West Houston area
* As population expands, the need for new air monitors increases

**Question and Answer:**

**Q:** Is there any expected research to study the correlation between high PM levels and higher COVID death/hospital rates?

* Yes

**Q:** There is an Inconsistency in Pasadena. They have refineries, why don't they have high level of PM 2.5?

* Maybe the air current cause the PM 2.5 blows from Pasadena to the West Houston

**Q:** Does EDF have plans to expand this work beyond Houston?

* Yes, want to expand and incorporate transportation data

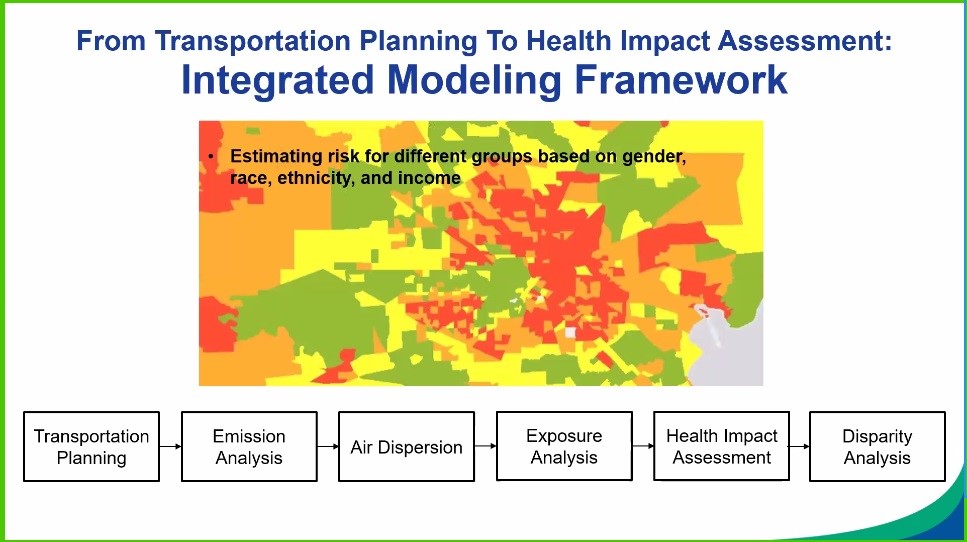
**Q:** Would you consider having a Webinar to explain how to use the Enviroscreen Tool?

* Yes

# **Advanced Fine Scale Transportation, Air Quality, Health Integrated Assessment Tool for Future Cities:**

**Presenter: Dr. Mahnaz Nadaf**

What is the impact of transportation decisions on air quality?

* Exposure to primary PM 2.5 and disparities
* Those with the lowest income, experience 43.3% higher exposure to vehicle emission compared to highest income group
* African Americans have 10.6% higher exposure than White Americans
* Latinos 17.1% higher compared to non-Latinos
* Groups with low income, non-white and Latinos are more likely to live closer to highways

# **Spatial-Temporal Air Monitoring Project (STAMP)**

**Presenter: Dr. Lu Liang - UNT**

**Background:**

* Air pollution concentration is highly dynamic at the intra-urban areas
* Influence of urban morphology
  + Horizontally- urban heat island landscape affects dispersion of pollutants
  + Vertically- wind direction

**Research:**

* Scope of study: UNT Main Campus
* Goal: to characterize the vertical and horizontal profile
* Portable sensors
  + Easy to get started with, to get an overall sense of your study area
* Stationary sensors

**PMAPS Project**

**Research Goals:** PM 2.5 sensors to build a fine-grain monitoring network to measure air quality more accurately in DFW

* Purple Air is being used
* Multiple sensors are being used throughout Denton Area- about 15 sensors
  + Sensors are in multiple area, from high pollution to low pollution
* Data collection is still ongoing
* Outreach:
* Targeted towards 7th grade students
* Will track facial expressions to see how students feel

# **Update on Effects of COVID-19 Transportation and Air Quality Trends**

**Presenter: Nick Vanhaasen - NCTCOG**

**Transportation**

* Traffic decrease when shelter in place order were in action, April 2020 saw a 27.8% reduction in traffic
  + Less traffic= more speed on highways
  + April low congestion, high speeds= 65mph
  + Higher levels of crashes and fatalities
* Passenger decreases on public transit

**Airport Impacts**

* Over 90% reduction in passengers in April 2020, compared to 2019

**Bicycle and Pedestrian Impacts: Trail Counts**

* Increase (30%) in March-May 2020 but decreasing in June

**Air Quality**

* Prior to Aug. 3, 2020: lowest frequency of high-level unhealthy exposure to Ozone
* How can we sustain impacts?
  + Electric and fuel cell vehicles
  + Telecommute

**Conclusion:**

**Miscellaneous**

* Nick Van Haasen: Sent Email to request the compiling of air quality data to have a centralized location for all of it

**Next Meeting:** Friday, November 6, 2020 from 9:30 to 11:30 a.m.

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| **Action Items** | **Lead Person/Agency on Action** | **Deadline** |
| Upload presentations and meeting recording to a dedicated webpage on NCTCOG.org | Dorothy Gilliam - NCTCOG | By November 6 Meeting |
| Webinar to explain how to use the Enviroscreen Tool | NCTCOG & EDF | N/A |